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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
09/648,304	08/25/00	SILVEIRA	A	1369-00

HM12/0524

IP DEPARTMENT
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EXAMINER	
PULLIAM, A	

ART UNIT	PAPER NUMBER
1615	4

DATE MAILED: 05/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/648,304	SILVEIRA ET AL.	
	Examiner	Art Unit	
	Amy E Pulliam	1615	

-- The MAILING DATE of this communication appears on th cover sheet with th correspondence address --

Peri d f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) Substituted
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on February 27, 1998. It is noted, however, that applicant has not filed a certified copy of the application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 2, 6-8, 12, 13, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramtoola (US Patent 5,641,515). Ramtoola discloses a controlled release pharmaceutical formulation comprising nanoparticles formed of a biodegradable polycyanoacrylate polymer, wherein the active agent is complexed to the polycyanoacrylate. The disclosed particles are capable of releasing the active at a slower release rate than nanoparticles of free active agent (abstract). Ramtoola also teach that the size of the nanoparticles is between 50 and 900 nm (column 2, lines 57-58). Further, Ramtoola teaches that the nanoparticles have a drug loading of 15-25% (abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, and 6-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramtoola, as discussed above. Ramtoola is discussed as teachings a controlled release formulation of nanoparticles comprising a polycyanoacrylate polymer, and an active, wherein the active is complexed to the polymer. Ramtoola also teaches methods of making the nanoparticles, which suggest applicant's broad process claims. Furthermore, although Ramtoola does not teach the three specifically claimed active ingredients, it is the position of the examiner that applicant has placed no criticality on the specific drug, and therefore any drug could benefit from the controlled release formulation disclosed by Ramtoola. Absent any evidence of criticality, it is the position of the examiner that one of ordinary skill in the art would have been motivated to use any well known drug, which would benefit from controlled release properties, in the formulation disclosed by Ramtoola. The expected result would be a successful controlled release formulation. Therefore, this invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen *et al.* (US Patent 5,932,248) and further in view of Trinh (US Patent 5,246,611). Chen *et al.* disclose a controlled release preparation comprising an ionic polymer matrix loaded with an active compound, wherein the active compound is a cytotoxic or cytostatic drug, and the active compound is complexed with a complexing agent in order to modify the release of the active from the polymer matrix (abstract). Chen *et al.* also teach doxorubicin as an exemplary active ingredient (column 14, claim 4). Chen *et al.* further teach that the ionic polymer matrix can be provided in the form of many types of formulations, including nanoparticles (column 3, lines 46-50). However, Chen *et al.* do not teach cyclodextrin as the complexing agent.

Trinh discloses cyclodextrin complexes. However, the disclosure of Trinh is relied upon for the teaching that cyclodextrin and its derivatives are very well known to act as complexing agents (column 1, lines 25-55). Furthermore, Trinh teaches that the teaching of cyclodextrins includes α, β, and gamma-cyclodextrins, and their derivatives, which are all known complexing agents.

Furthermore, it is the position of the examiner that one of ordinary skill in the art would have been motivated to use a different and known complexing agent in the formulation disclosed by Chen *et al.*, as Chen *et al.* disclose that this is acceptable, and especially because Trinh *et al.* teach that cyclodextrins are so well known as complexing agents. The expected result would be a successful microparticle or nanoparticle formulation with an active cytotoxic agent complexed by a complexing

agent. Therefore, this invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy E Pulliam whose telephone number is (703) 308-4710. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on (703) 308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3592 for regular communications and (703) 305-3592 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.

AEP
May 21, 2001

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600